

# Safety module - AXL F LPSDO8/3 1F - 2702171

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Safety-related digital output module, IP20 protection, for the SafetyBridge system. The module has four safe digital outputs with two-channel occupancy or 8 safe digital outputs with single-channel occupancy

## Product Description


The safety module is an output module from the Axioline F product range with integrated safety logic designed for use in a SafetyBridge Technology V3 system. The safety module can be used as part of an Axioline F station at any point within an EtherCAT®, EtherNet/IP™, Sercos, Modbus, PROFINET or PROFIBUS system. The module has four safe digital outputs for two-channel assignment or eight safe digital outputs for single-channel assignment.

## Your advantages

- ✓ Cost-effective system configuration, as no safety PLC or safe fieldbus system is required
- ✓ Flexible use, thanks to compatibility with all bus couplers from the Axioline F range
- ✓ Reduced installation time, thanks to fast wiring and easy handling
- ✓ Easy configuration using the free SAFECONF software
- ✓ Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with IEC 62061, SIL 3 in accordance with IEC 61508



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 004983
GTIN	4055626004983

## Technical data

### Dimensions

Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	Housing dimensions

### Ambient conditions

Ambient temperature (operation)	-35 °C ... 60 °C (Mounting position: any)
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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 75 % (on average, 85% infrequently, non-condensing)
Permissible humidity (storage/transport)	10 % ... 75 % (non-condensing)
Air pressure (operation)	70 kPa ... 108 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Degree of protection	IP20

### Connection data

Designation	Axioline F connector
Connection method	Spring-cage connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16

### Interfaces

Designation	Axioline F local bus
Connection method	Bus base module

### Digital outputs

Output name	Digital outputs
Number of outputs	4 (with two-channel assignment)
	8 (for single-channel assignment)
	8
Protective circuit	Overload protection, freewheeling circuit for inductive loads, Discharge circuit for accelerated discharge of capacitive loads
Output voltage	24 V DC
Output current per channel	2 A
Output current of the device	8 A
Output current	max. 2 A (per channel)
	max. 1.5 A (per channel according to CUL <sub>US</sub> )
	max. 4 A (per group)
	max. 3 A (per group according to CUL <sub>US</sub> )
	max. 8 A (Total current of all outputs; Please observe the notes in the user manual.)
	max. 6 A (Total current of all outputs according to CUL <sub>US</sub> )
Behavior with overload	Affected output is disabled and a diagnostic message is generated.

### General

Mounting type	DIN rail
Color	yellow

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## Technical data

### General

Net weight	222 g
Note on weight specifications	with connectors and bus base module

### Axioline potentials

Designation	Axioline F local bus supply ( $U_{Bus}$ )
Supply voltage	5 V DC (via bus base module)
Current consumption	typ. 260 mA (all outputs set; power supply by $U_O$ of 19.2 V DC to 30.2 V DC)
	max. 280 mA
Designation	Supply for digital output modules ( $U_O$ )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption	typ. 25 mA (all outputs set; power supply by $U_O$ with 30.2 V DC; without power supply to the actuator)
Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection

### SafetyBridge properties

Connection to I/O modules	max. 16 (safe digital I/O modules)
Logic memory	30 kByte

### Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)
Designation	EN ISO 13849
Performance level (PL)	max. e (two channel; dependent in parameterization and wiring)
Category	max. 4 (two channel; dependent in parameterization and wiring)
Designation	EN 62061
Safety Integrity Level (SIL)	max. 3 (two channel; dependent in parameterization and wiring)

### Standards and Regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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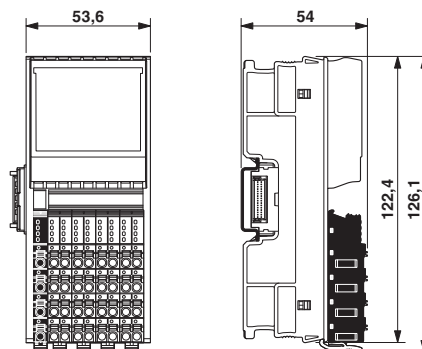
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

# Safety module - AXL F LPSDO8/3 1F - 2702171

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 11.0	27242604
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242604
eCl@ss 9.0	27242604

### ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC002498
ETIM 6.0	EC001599
ETIM 7.0	EC001599

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602
UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

## Approvals

### Approvals

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## Approvals

Approvals

Functional Safety / UL Listed / cUL Listed / Functional Safety / BSH / DNV GL / cULus Listed

Ex Approvals

### Approval details

Functional Safety			968/EZ 424.05/17
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
Functional Safety			968/EZ 424.05/17
BSH			840
DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00000DF
cULus Listed			

## Accessories

Accessories

Device marking

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### Accessories

Insert label - EMT (35X46)R - 0801604



Insert label, for the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped into marker carrier, lettering field size: 35 x 46 mm, Number of individual labels: 500

Insert label - EMT (35X46)R YE - 0801605



Insert label, for the Axioline F series from Phoenix Contact, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped into marker carrier, lettering field size: 35 x 46 mm, Number of individual labels: 500

### DIN rail connector

Bus connector - AXL F BS F - 2688129



Axioline F bus base module for housing type F

### Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 10.15 mm, lettering field size: 4 of 10.15 x 5 mm and 1 of 5.8 x 5 mm, Number of individual labels: 50

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PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>